This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.   (Original) A cable modem termination system (CMTS), the CMTS comprising:
a gateway configured to output signals on at least two types of data tunnels for transfer over a cable network to Customer Premises Equipment (CPE), each data tunnel characterized as a one-way data stream of out-of-band (OOB) messaging signals, where each type of data tunnel is associated with a different type of OOB messaging signals such that different types of data tunnels transfer different types of OOB messages.

2.   (Original) The CMTS of claim 1 wherein the gateway is configured to output the OOB messaging signals on at least four types of data tunnels.

3.   (Original) The CMTS of claim 1 wherein at least one of the types of data tunnels is a broadcast tunnel.

4.   (Original) The CMTS of claim 1 wherein at least one of the types of data tunnel is a conditional access tunnel.

5.   (Original) The CMTS of claim 1 wherein at least one of the types of data tunnels is an application tunnel.

6.   (Original) The CMTS of claim 1 wherein at least one of the types of data tunnels is a code download tunnel.

7.   (Original) The CMTS of claim 1 further comprising a plurality of output ports in communication with the gateway for outputting the data streams of the data tunnels onto the network, wherein each output port includes at least two types of data tunnels.

8.   (Original) The CMTS of claim 7 wherein a first and a second one of the plurality of output ports are associated with different types of OOB messaging signals.

-2-

9.   (Original) The CMTS of claim 8 further comprising a plurality of blades, each blade including one or more output ports.

10.   (Original) The CMTS of claim 9 wherein the first and second output ports are located on the same blade.

11.   (Original) The CMTS of claim 9 wherein the first and second output ports are located on different blades.

12.   (Original) The CMTS of claim 1 wherein each data tunnel is identified with a network address.

13.   (Original) The CMTS of claim 1 wherein the gateway transfers the OOB messaging signals according to protocols defined in a Data Over Cable Service Interface Specification (DOCSIS).

14.   (Original) The CMTS of claim 1 wherein the CPE is a settop box.

15.   (Original) The CMTS of claim 1 wherein the CPE includes an embedded cable modem (eCM) and an embedded settop box (eSTB).

16.   (Original) The CMTS of claim 15 wherein the OOB messaging signals are transferred to the eCM.

17.   (Original) The CMTS of claim 1 wherein the CMTS outputs a downstream channel descriptor (DCD) for associating the different types of data tunnels with network addresses.

18.   (Original) A cable modem termination system (CMTS), the CMTS comprising:

a gateway configured to output signals on a plurality of data tunnels for transfer over a cable network to Customer Premises Equipment (CPE), each data tunnel characterized as a one-way data stream of out-of-band (OOB) messaging signals; and

a plurality of output ports for transferring the OOB messaging signals from the gateway to the cable network, wherein each output port is capable of transferring different OOB messaging signals.

19.   (Original) The CMTS of claim 18 wherein each output port includes at least two types of data tunnels.

20.   (Original) The CMTS of claim 18 wherein a first and a second one of the plurality of output ports are associated with different OOB messaging signals.

21.   (Original) The CMTS of claim 20 further comprising a plurality of blades, each blade including one or more output ports.

22.   (Original) The CMTS of claim 21 wherein the first and second output ports are located on the same blade.

23.   (Original) The CMTS of claim 21 wherein the first and second output ports are located on different blades.

24-38. (Canceled)

39.   (New) A method comprising:

receiving data services information from a data network;

receiving out-of-band signals and application data from a management network;

processing the data services information, out-of-band signals, and application data for transmission; and

transmitting the data services information, out-of-band signals, and application data on two-way output channels and a plurality of different types of one-way output data tunnels, each different type of out-of-band signal sent on a different type of data tunnel.

-4-

40.   (New) The method of claim 39, wherein processing the data services information, out-of-band signals, and application data comprises converting them from IP packets into digital cable packets.

41.   (New) The method of claim 39, further comprising receiving digital cable packets from a subscriber station.

42.   (New) The method of claim 41, further comprising converting the digital cable packets to IP packets.

43.   (New) The method of 42, further comprising transmitting the IP packets to an internet service provider.

44.   (New) The method of claim 39, wherein the tunnel type is a common broadcast tunnel.

45.   (New) The method of claim 39, wherein the tunnel type is a conditional access tunnel.

46.   (New) The method of claim 39, further comprising transmitting a downstream channel descriptor message for mapping different tunnels with their network address.

47.   (New) A method comprising:
        receiving video signals, data services information, out-of-band signals, and application data on two-way output channels and on a plurality of one-way data tunnels, each different type of out-of-band signal received on a different type of data tunnel;
        transmitting the data services information and out-of-band signals to one or more devices with cable modem functionality; and
        transmitting the application data and video signals to one or more devices with set-top box functionality.

48.   (New) The method of claim 47, wherein the communication of the video signals, data services information, out-of-band signals, and application data is defined by the Data Over Cable Service Interface Specification (DOCSIS).

49.   (New) The method of claim 47, wherein the one or more devices with set-top box functionality outputs the video signals and other media signals to a media output device.

50.   (New) The method of claim 47, wherein the one or more devices with cable modem functionality processes the out-of-band signals and other non-media signals.

51.   (New) The method of claim 50, wherein the one or more devices with cable modem functionality further transmits the out-of-band and the other non-media signals to the one or more devices with set-top box functionality via an internal communications link for processing.

52.   (New) The method of claim 47, further comprising providing conditional access control for the subscriber station.

53.   (New) An apparatus comprising:
        a processor;
        a memory having stored therein computer executable instructions, that when executed by the processor, cause the apparatus to perform a method of:
        receiving video signals, data services information, out-of-band signals, and application data on two-way output channels and on a plurality of one-way data tunnels, each different type of out-of-band signal received on a different type of data tunnel;
        transmitting the data services information and out-of-band signals to one or more devices with cable modem functionality; and
        transmitting the application data and video signals to one or more devices with set-top box functionality.

54.   (New) The apparatus of claim 53, wherein the communication of the video signals, data services information, out-of-band signals, and application data is defined by the Data Over Cable Service Interface Specification (DOCSIS).

55.   (New) The apparatus of claim 53, wherein the one or more devices with set-top box functionality outputs the video signals and other media signals to a media output device.

56.   (New) The apparatus of claim 53, wherein the one or more devices with cable modem functionality processes the out-of-band and other non-media signals.

57.   (New) The apparatus of claim 56, wherein the one or more devices with cable modem functionality further transmits the out-of-band and the other non-media signals to the one or more devices with set-top box functionality via an internal communications link for processing.

58.   (New) The apparatus of claim 53, where the method further performs providing conditional access control for the subscriber station.

59.   (New) A computer-readable medium containing computer-executable instructions for performing the steps comprising:

        receiving data services information from a data network;

        receiving out-of-band signals and application data from a management network;

        processing the data services information, out-of-band signals, and application data for transmission; and

        transmitting the data services information, out-of-band signals, and application data on two-way output channels and a plurality of different types of one-way output data tunnels, each different type of out-of-band signal sent on a different type of data tunnel.

60.   (New) A computer-readable medium containing computer-executable instructions for performing the steps comprising:

        receiving video signals, data services information, out-of-band signals, and application data on two-way output channels and on a plurality of one-way data tunnels, each different type

of out-of-band signal received on a different type of data tunnel;

transmitting the data services information and out-of-band signals to one or more devices with cable modem functionality; and

transmitting the application data and video signals to one or more devices with set-top box functionality.